

## SEQUENCE LISTING

### (1) GENERAL INFORMATION:

(i) APPLICANTS: William M. Pardridge  
Ruben J. Boado

(ii) TITLE OF INVENTION: Delivery Of Genes Encoding Short Hairpin  
RNA Using Receptor-Specific Nanocontainers

(iii) NUMBER OF SEQUENCES: 20

#### (iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Shapiro & Dupont LLP  
(B) STREET: 233 Wilshire Boulevard, Suite 700  
(C) CITY: Santa Monica  
(D) STATE: CA  
(E) COUNTRY: USA  
(F) ZIP: 90067

#### (v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy Disk  
(B) COMPUTER: IBM PC compatible  
(C) OPERATING SYSTEM: Windows 2000  
(D) SOFTWARE: MS Word

#### (viii) ATTORNEY/AGENT INFORMATION

(A) NAME: Oldenkamp, David J.  
(B) REGISTRATION NUMBER: 29,421  
(C) REFERENCE/DOCKET NUMBER: 0180.0063

#### (ix) TELECOMMUNICATIONS INFORMATION:

(A) TELEPHONE: (310) 319-5411  
(B) TELEFAX: (310) 319-5401

### (2) INFORMATION FOR SEQ ID NO: 1:

#### (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 29 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 1

CCUCACCUCC ACCGUGCAAC UCAUCACGC

29

### (2) INFORMATION FOR SEQ ID NO: 2:

#### (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 74 nucleotides  
(B) TYPE: nucleotide

(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 2

GCGUGAUGAG UUGCACGGUG GAGGUGAGGG AAGCUUGCUU CGCCUCCACC GUGCAAUUCA  
UCGCGCAGUU UUUU

60  
74

(2) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 74 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 3

GCTGCCCCGG CCGTCCCGGA GGGTCGCATG AAGCTTGATG CGACTCTTCG GGACGGTCGG  
GGTAGCGCTT TTTT

60  
74

(2) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 82 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 4

AATTAAAAAA GCGCTACCCC GACCGTCCCG AAGAGTCGCA TCAAGCTTCA TGCGACCCTC  
CGGGACGGCC GGGGCAGCGG CC

60  
82

(2) INFORMATION FOR SEQ ID NO: 5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 74 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 5

GATCTTAGGC CCATTCGTTG GACAGCCTTG AAGCTTGAGG GTTGTCCGAC GAATGGGCCT  
AAGATTCCTT TTTT

60  
74

(2) INFORMATION FOR SEQ ID NO: 6:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 82 nucleotides
  - (B) TYPE: nucleotide
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 6

<u>AATTAAAAAA</u> GGAATCTTAG GCCCATTCGT CGGACAACCC TCAAGCTTCA AGGCTGTCCA	60
ACGAATGGGC CTAAGATCGG <u>CC</u>	82

(2) INFORMATION FOR SEQ ID NO: 7:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 74 nucleotides
  - (B) TYPE: nucleotide
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 7

GTCCTGCTGG TAGTCAGGGT TGTCCAGGCG AAGCTTGCTC TGGATAATCC TGACTATCAG	60
CAGGACTTTT TTTT	74

(2) INFORMATION FOR SEQ ID NO: 8:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 82 nucleotides
  - (B) TYPE: nucleotide
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 8

<u>AATTAAAAAA</u> AAGTCCTGCT GATAGTCAGG ATTATCCAGA CCAAGCTTCG CCTGGACAAC	60
CCTGACTACC AGCAGGACGG <u>CC</u>	82

(2) INFORMATION FOR SEQ ID NO: 9:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 74 nucleotides
  - (B) TYPE: nucleotide
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 9

GTCCCTTATA CACCGTGCCG AACGCACCGG AAGCTTGCGG TCGGTTCGGC GCGGTGTGTG 60  
AGGGATTCTT TTTT 74

(2) INFORMATION FOR SEQ ID NO: 10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 82 nucleotides
- (B) TYPE: nucleotide
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 10

AATTAAAAAA GAATCCCTCA CACACCGCGC CGAACGCACC GCAAGCTTCC GGTGCGTTCG 60  
GCACGGTGTA TAAGGGACGG CC 82

(2) INFORMATION FOR SEQ ID NO: 11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 74 nucleotides
- (B) TYPE: nucleotide
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 11

GCGTGATGAG TTGCACGGTG GAGGTGAGGG AAGCTTGCTT CGCCTCCACC GTGCAATTCA 60  
TCGCGCAGTT TTTT 74

(2) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 82 nucleotides
- (B) TYPE: nucleotide
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 12

AATTAAAAAA CTGCGCGATG AATTGCACGG TGGAGGCGAA GCAAGCTTCC CTCACCTCCA 60  
CCGTGCAACT CATCACGCGG CC 82

(2) INFORMATION FOR SEQ ID NO: 13:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 74 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 13

GGATGGAGGA GATCTCGCTG GCAGGGATTG AAGCTTGAGT CTCTGCCGGC GAGATCTCCT 60  
CCGTCCTGTT TTTT 74

(2) INFORMATION FOR SEQ ID NO: 14:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 82 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 14

AATTAAAAAA CAGGACGGAG GAGATCTCGC CGGCAGAGAC TCAAGCTTCA ATCCCTGCCA 60  
GCGAGATCTC CTCCATCCGG CC 82

(2) INFORMATION FOR SEQ ID NO: 15:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 72 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 15

TCACCACATA ATTACCTTTC TTTTCCTCGA AGCTTGGAGG GAAAGGAAGG TAGTTGTGTG 60  
GTGATCTTTT TT 72

(2) INFORMATION FOR SEQ ID NO: 16:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 80 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 16

AATTAAAAAA GATCACCACA CAACTACCTT CCTTTCCTC CAAGCTTCGA GGAAAAGAAA 60  
GGTAATTATG TGGTGAGGCC 80

(2) INFORMATION FOR SEQ ID NO: 17:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 72 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 17

TGTCACCACA TAATTACCTT TCTTTTCCGA AGCTTGGGGA AAGGAAGGTA GTTGTGTGGT 60  
GACATCTTTT TT 72

(2) INFORMATION FOR SEQ ID NO: 18:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 80 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 18

AATTAAAAAA GATGTCACCA CAACTACC TTCCTTTCCC CAAGCTTCGG AAAAGAAAGG 60  
TAATTATGTG GTGACAGGCC 80

(2) INFORMATION FOR SEQ ID NO: 19:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 72 nucleotides  
(B) TYPE: nucleotide  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 19

CTGTCACCAC ATAATTACCT TTCTTTTCGA AGCTTGGGAA AGGAAGGTAG TTGTGTGGTG 60  
ACAGTCTTTT TT 72

(2) INFORMATION FOR SEQ ID NO: 20:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 80 nucleotides  
 (B) TYPE: nucleotide  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: nucleic acid

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 20

<u>AATTAAAAAA</u> GACTGTCACC ACACA <sup>^</sup> ACTAC CTCCTTTCC CAAGCTTCGA AAAGAAAGGT	60
AATTATGTGG TGACAGGGCC	80